

afterload	the amount of resistance to ejection of blood from the ventricle; the heart must work to overcome this resistance to fully eject blood from the left ventricle
anemia	a deficiency of red blood cells
angina pectoris	transient imbalance b/w myocardial O <sub>2</sub> supply and demand. condition results in chest pain that is aching, sharp, tingling, or burning
angiography	radiographic imaging of the heart and blood vessels after injection of a contrast dye
artificial airways	<p>Oropharyngeal Airway- medical device called an airway adjunct used to maintain a patent (open) airway. It does this by preventing the tongue from (either partially or completely) covering the epiglottis, which could prevent the patient from breathing.</p> <p>Nasopharyngeal Airway- tube that is designed to be inserted into the nasal passageway to secure an open airway</p>

atelectasis	collapse of alveoli
atrial fibrillation	<p>Chaotic, irregular atrial activity</p> <p>No identifiable P Waves</p> <p>Loss of atrial kick, pooling of blood in atria -&gt; Development of microemboli</p> <p>Commonly occurs in aging adults</p> <p>Complaints of fatigue, fluttering to chest, or shortness of breath</p>
Bronchoscopy	<p>Visual examination of the tracheobronchial tree through a narrow, flexible fiberoptic bronchoscope.</p> <p>Performed to obtain fluid, sputum, or biopsy samples; remove mucous plugs or foreign bodies.</p>
bronchoscopy	the visual examination of the bronchi using a bronchoscope
cardiac catheterization	<p>introduction of a flexible, narrow tube or catheter through a vein or artery into the heart to withdraw samples of blood, measure pressures within the heart chambers or vessels, and inject contrast media for fluoroscopic radiography and cine film (motion picture) imaging of the chambers of the heart and coronary arteries--very often includes interventional procedures such as angioplasty and atherectomy</p>

Cardiac catheterization and angiography

Used to visualize cardiac chambers, valves, the great vessels, and coronary arteries. Pressures and volumes within the four chambers of the heart are also measured.

cardiac index

More precise measure and takes into consideration tissue perfusion and the client's body surface area.

$CI = CO \text{ (Cardiac Output)} / BSA \text{ (Body Surface Area)}$

cardiac output

the volume of blood pumped per minute by the left ventricle of the heart

cardiopulmonary rehabilitation

Process of actively assisting the cardiopulmonary client to achieve and maintain an optimal level of health through controlled physical exercise, nutritional counseling, relaxation and stress management techniques, prescribed medication, oxygen therapy, and adherence to the rehabilitation program.

cardiopulmonary resuscitation

used to establish Airway, initiate Breathing, and maintain Circulation (ABC's);, emergency procedure consisting of artificial ventilation and external cardiac massage

chest physiotherapy	group of therapies used to mobilize pulmonary secretions, include: postural drainage, chest percussion, and vibration
chest tube	Catheter inserted through the thorax to remove air and fluids from the pleural space, to prevent air or fluid from reentering the pleural space, or to reestablish normal intrapleural and intrapulmonic pressures.
compliance	ability of lungs to distend or expand in response to increased alveolar pressure
cor pulmonale	Right-Sided Heart Failure due to pulmonary hypertension caused by the accumulated effects of multiple small emboli in the lung`
cough	sudden, audible expulsion of air from the lungs; a protective reflex to clear the trachea, bronchi, and lungs of irritants and secretions

crackles	abnormal lung sounds heard on auscultation; discrete single sounds heard on inspiration, occur in brief bursts; may be fine (high pitched or soft) or coarse (low pitched and loud); "rales"
cyanosis	blue, the bluish coloration of the skin due to the presence of deoxygenated hemoglobin in blood vessels near the skin surface; late sign of hypoxia`
deoxyhemoglobin	hemoglobin not combined with oxygen; reduced hemoglobin
Diaphragmatic breathing	more difficult and requires the client to relax intercostal and accessory respiratory muscles while taking deep inspirations
diffusion	the process for the exchange of respiratory gases in the alveoli and the cappillaries of the body tissues

diffusion	process for the exchange of respiratory gases in the alveoli and the capillaries of the body tissues
dyspnea	difficult or labored breathing; , shortness of breath
dysrhythmias	Distrubances in conduction caused by electrical impulses that do not originate from the SA node.
Echocardiography	Noninvasive measure of heart structure and heart wall motion. Graphically demonstrates overall cardiac performance.
electrocardiogram(ECG)	Reflects the electrical activity of the conduction system by monitoring the regularity and the path of the electrical impulse through the conduction system, but does not reflect the muscular work of the heart.

endotracheal tubes

short term artificial airways to admin mechanical ventilation, relieve upper airway obstruction, protect against aspiration, or clear secretions

Exercise stress test

ECG is monitored while the client walks on a treadmill at a specified speed and duration of time. Used to evaluate the cardiac response to physical stress. The test is not a valuable tool for evaluation of cardiac response in women due to an increased false-positive finding

expiration

The movement of air out of the respiratory tract. Expiration can be passive (caused by relaxation of the diaphragm and elastic recoil of the lungs) or active (caused by contraction of the abdominal muscles, which increases intraabdominal pressure and forces the diaphragm up past its normal relaxed position). passive process

Guillain-Barre syndrome

autoimmune condition that causes acute inflammation of peripheral nerves; causes hypoventilation

hematemesis

vomiting of blood from bleeding in the stomach or esophagus

hemoglobin	iron-containing protein in red blood cells that transports oxygen from the lungs to the tissues of the body
hemoptysis	coughing up blood from the respiratory tract; bloody sputum
Hemothorax	Accumulation of blood and fluid in the pleural cavity between the parietal and visceral pleurae. Usually as a result of trauma
hepatomegaly	abnormal enlargement of the liver
Holter monitor	Portable ECG worn by the client. The test produces a continuous ECG tracing over a period of time. Clients keep a diary of activity, noting when they experience rapid heartbeats or dizziness. Evaluation of the ECG recording along with the diary provides information about the heart's electrical activity during activities of daily living



Humidification

process of adding water to  
gas

Hyperventilation

rate and depth of respiration  
exceed the demands for  
oxygen delivery and carbon  
dioxide removal. (leads to  
hypocapnia)

Hypoventilation

occurs when alveolar  
ventilation inadequate to  
meet body's oxygen demand  
or to eliminate sufficient  
carbon dioxide.

Hypovolemia

decreased circulatory blood  
volume resulting from  
extracellular fluid losses.

Hypoxia

inadequate tissue  
oxygenation at the cellular  
level

Incentive spirometry	Method of encouraging voluntary deep breathing by providing visual feedback to clients of the inspiratory volume they have achieved.
inspiration	The movement of air into the respiratory tract. Inspiration is an <b>active process</b> , requiring contraction of the diaphragm.
intrapleural pressure	pressure in the pleural cavity surrounding the lungs
intrapulmonic pressures	the air pressure within the bronchial tree and alveoli; fluctuates below and above atmospheric pressure during breathing
ischemia	restriction in blood supply, generally due to factors in the blood vessels, with resultant damage or dysfunction of tissue.

left-sided heart failure

type of heart failure that is a life-threatening condition in which the heart cannot pump enough blood to the body. Signs and symptoms include: cough (produces frothy or blood-tinged mucus), decreased urine production, difficulty lying down (need to sleep with the head elevated to avoid shortness of breath), fatigue, weakness, and faintness.

Lung scan

Used to identify abnormal masses by size and location. Identification of masses is used in planning therapy and treatments

myasthenia gravis

a chronic progressive disease characterized by chronic fatigue and muscular weakness (especially in the face and neck); causes hypoventilation

Myocardial infarction (MI)

results from sudden decrease in coronary blood flow or an increase in myocardial O<sub>2</sub> demand w/o adequate coronary perfusion

Myocardial ischemia

Cardiac condition that results when the supply of blood to the myocardium from the coronary arteries is insufficient to meet the oxygen demands of the organ.

Nasal cannula	Device for delivering oxygen by way of two small tubes that are inserted into the nares.
Nebulization	Process of adding moisture to inspired air by the addition of water droplets.
necrosis	the localized death of living cells (as from infection or the interruption of blood supply)
normal sinus rythm	ECG / EKG reading that is within normal limits (60 - 100 bpm)
oral airway	curved device that keeps a relaxed tongue positioned forward within the mouth, preventing the tongue from obstructing the upper airway

Orthopnea	abnormal condition in which the pt. uses mult. pillows when lying down or must it with arms elevated and leaning forward to breath
Peak expiratory flow rate (PEFR)	measure of the fastest flow of exhaled air after a maximal inspiration; normal is based on age and body weight;
Peak expiratory flow rate (PEFR)	reflects changes in large airway sizes and is an excellent predictor of overall airway resistance in the client with asthma. Daily measurement is for early detection of asthma exacerbations
pleural friction rub	creaking or grating sound from roughened, inflamed surfaces of the pleura rubbing together, evident during inspiration, expiration, or both and no change with coughing; usually uncomfortable, especially on deep inspiration.
Pneumothorax	the accumulation of air in the pleural space causing a pressure imbalance that prevents the lung from fully expanding or can cause it to collapse

poliomyelitis	an acute viral disease marked by inflammation of nerve cells of the brain stem and spinal cord; causes hypoventilation
Postural drainage	Positioning a patient so that gravity aids in the drainage of secretions from the bronchi and lobes of the lungs
preload	Volume of blood in the ventricles at the end of diastole, immediately before ventricular contraction., end diastolic volume
Pursed-lip breathing	Deep inspiration through the nose and mouth, not using pursed lips, followed by prolonged expiration through pursed lips.
regurgitation	backflow of blood through a defective heart valve

rhonchi

course, low pitched breath sounds heard in patients with chronic mucus in the upper airways.

right-sided heart failure

Impaired functioning of the right ventricle characterized by elevated pulmonary vascular resistance.

Causes: Pulmonary disease or long-term left-sided heart failure.

Clinical: Weight gain, distended neck veins, hepatomegaly and splenomegaly, and dependent peripheral edema.

sinus brachycardia

this rhythm is often seen as a normal variation in athletes, during sleep, or in response to a vagal maneuver. regular rhythm, rate less than 60

sinus tachycardia

rapid, regular rhythm originating in the SA. Char by a heartbeat of 100 to 150 or more per minute. Causes may include exercise, anxiety, fever, shock, meds, hypothermia, heart failure, excessive caffeine and tobacco use

somnolence

drowsiness or sleepiness

splenomegaly

an abnormal enlargement of the spleen

stenosis

the abnormal narrowing of a passage or opening, such as a blood vessel or heart valve

stridor

a whistling sound when breathing (usually heard on inspiration)

stroke volume

the amount of blood pumped by the left ventricle in each contraction

surfactant

An amphipathic molecule secreted by cells in the alveoli (type 2 alveolar cells) that reduces surface tension on the inside of the alveolar walls. This prevents the alveoli from collapsing upon exhale and sticking together, thus reducing the effort required for inspiration.



Thallium stress test	An ECG stress test with the addition of thallium-201 injected IV. Determines coronary blood flow changes with increased activity.
thallium stress test	performed to evaluate how well blood flows through the coronary arteries of the heart muscle during exercise
Thoracentesis	Specimen of pleural fluid is obtained for cytological examination. The results may indicate an infection or neoplastic disease. Identification of infection or a type of cancer is important in determining a plan of care
Thoracentesis	insertion of a needle into the pleural cavity to withdraw fluid for diagnostic purposes, to drain excess fluid, or to re-expand a collapsed lung
tracheal suctioning	<ul style="list-style-type: none"> <li>-through an artificial airway</li> <li>-maintain suction pressure b/t 120-150 mm Hg</li> </ul>

ventilation	Respiratory process by which gases are moved into and out of the lungs.
Ventricular fibrillation	also known as V fib, the rapid, irregular, and useless contractions of the ventricles. Instead of pumping strongly the heart quivers ineffectively. This condition is the cause of many sudden cardiac deaths; requires immediate intervention
Ventricular tachycardia	A life-threatening dysrhythmia because of the decreased cardiac output and the potential to deteriorate into ventricular fibrillation.
Wheezing	high-pitched musical sound caused by high-velocity movement of air through a narrowed airway
wheezing	abnormal breath sounds; whistling sounds heard with upper airway obstruction

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work of breathing

..., effort required to expand  
and contract the lungs

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